

Thames Valley IAPT-LTC services clinical and health economics evaluation

Does psychological therapy provided by the IAPT-LTC programme improve mental health and reduce health care utilisation and associated health care cost?

*Findings from **Cohort 1***

starting treatment between 1st June 2017 and 31st August 2017

September 2018

Context

This document is focused on one of the first cohorts of patients who received treatment from the Improving Access to Psychological Therapies (IAPT) Long Term physical health Conditions programme (IAPT-LTC). IAPT services across Thames Valley were awarded Early Implementer funding to set up these new, integrated treatments for patients suffering with LTC(s) and co-morbid depression/ anxiety.

Participating services were Talking Therapies in Berkshire, Talking Space PLUS in Oxfordshire and Healthy Minds in Buckinghamshire.

These new treatment services are co-located in primary care and delivered in multi-disciplinary teams. IAPT psychological therapists work with their colleagues to provide holistic treatments e.g. with diabetic nurses, cardiac rehab nurses and with COPD physio specialists.

LTCs covered include Diabetes, Chronic Obstructive Pulmonary Disease, Cardiac problems, Persistent Physical Symptoms (formally Medically Unexplained Symptoms), Chronic Fatigue Syndrome and Irritable Bowel Syndrome.

Content

- Summary slide of health economics findings
- Background to Thames Valley health economics evaluation project
- Clinical scores
- Healthcare costs pre and post IAPT treatment
- Healthcare activity pre and post IAPT treatment
- Summary
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The basics explained for this cohort one ,3 months before and 3 months after IAPT-LTC treatment comparison of use of health care services in primary and secondary care

Primary Care activity: GP appointments, practice nurses, specialist nurses

Secondary Care activity: Accident and Emergency, Out-Patient and In-Patient

The study used real time, actual Secondary Use Service (**SUS**) data for calculating activity and cost for **secondary care**. This is data as recorded and coded within the hospital setting (A&E, IP and OP) and as charged to the commissioners (rather than an estimate). Study sample was *n 462*

The study used **patient self-reported data** for **calculating primary care activity** (Client Service Receipt Inventory, **CSRI**) by asking how often participants had seen their GP, practice nurse etc. both before and after IAPT-LTC treatment. A Thames Valley agreed cost structure was used to estimate cost (see page 29 with examples of GP visit cost etc). Study sample was *n 57*.

Summary of health economics findings cohort 1: *cost and activity* both reduced following treatment

	Total primary care <i>n=462</i>	Total secondary care <i>n=462</i>	Total savings cohort 1	Per patient average primary care	Per patient average secondary Care	Total per patient average
<i>Healthcare utilisation cost reduction over 3 months (compared 3 months pre to 3 months post IAPT-LTC treatment)</i>	£54,000	£98,000	£152,000 total over a 3 month period	£117 Based on a sub-group of paired, high quality CSRs <i>n= 57</i>	£212 Based on actual SUS costs	£329 saving per patient over 3 months
<i>Healthcare utilisation activity reduced over 3 months (compared 3 months pre to 3 months post IAPT-LTC treatment)</i>				From 6.72 appointments pre-IAPT treatment to 4.29 post-IAPT treatment, evenly spread across primary care	From 3.62 contacts pre-IAPT treatment to 3.27 post-IAPT treatment with greatest reduction in-patient	

NB: these are patients with 2 or more IAPT treatment sessions (excluding 9 with >10k SUS data) **471-9 = 462**. We are looking separately at patients with only 1 session

Thames Valley IAPT-LTC study: background

The project: *Does psychological therapy provided by the IAPT-LTC programme reduce health care utilisation and associated health care cost?*

Pragmatic evaluation using a stepped-wedge design of adults with anxiety and/or depression and comorbid long-term physical health conditions.

In partnership with Professor David Stuckler, University of Bocconi and the Anxiety and Depression Network, Oxford AHSN

Based on 2 cohorts starting at different times across TV

This report is based on **Cohort 1 only**.

Background continued

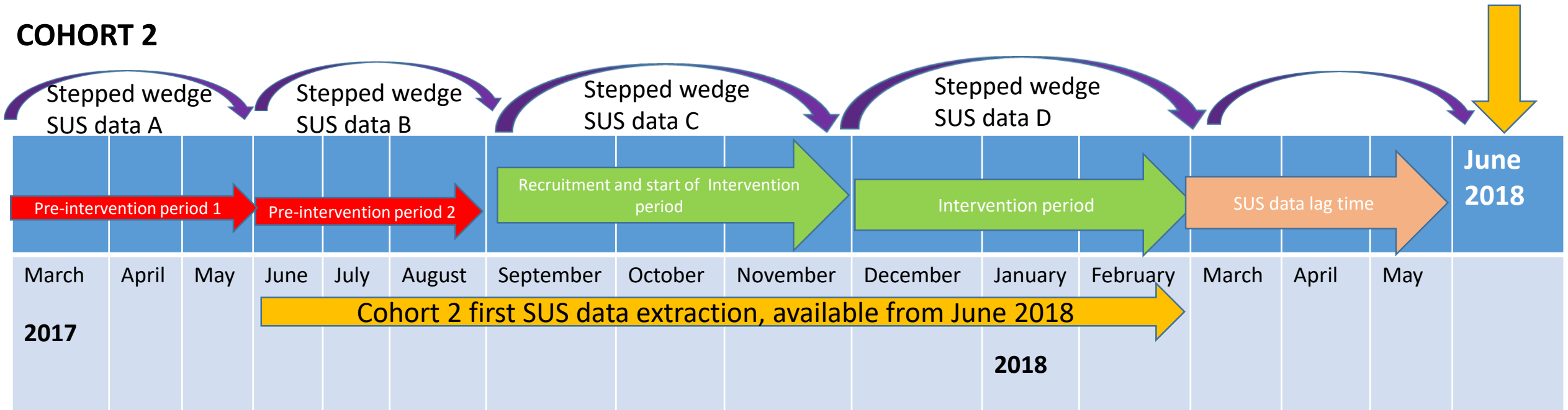
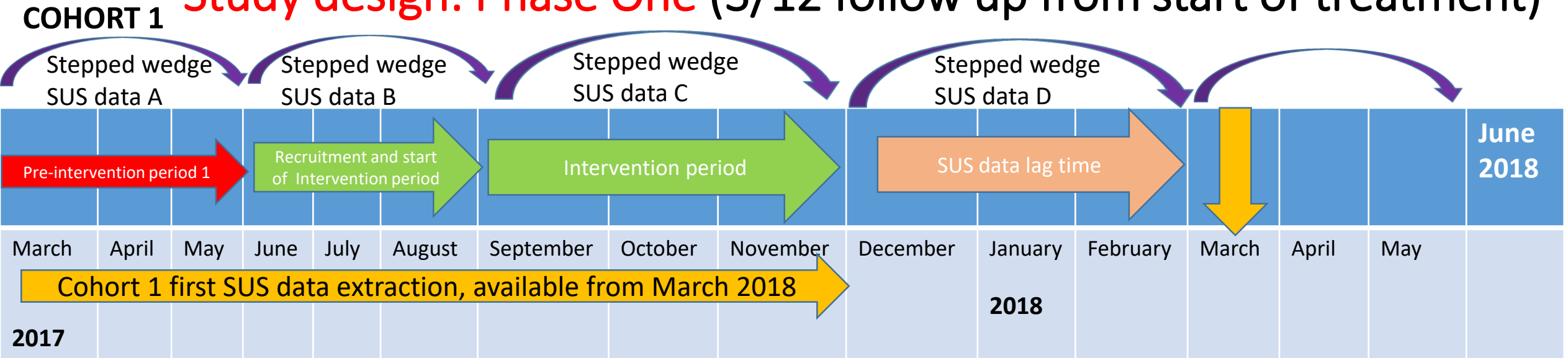
This health economics analysis is based on comparing health care utilisation 3 months ***pre starting date of treatment*** and 3 months ***post starting date of treatment*** referred to in this report as 3 months pre and 3 months post.

Further analyses (including cohort 2) over a longer period of time including 6 months and, funding permitting, 12 months pre and post IAPT-LTC treatment have now started. We will also be undertaking stepped wedge analyses.

Clinical outcomes: *Do patients benefit from IAPT-LTC treatment?* An evaluation of IAPT-LTC patient outcomes

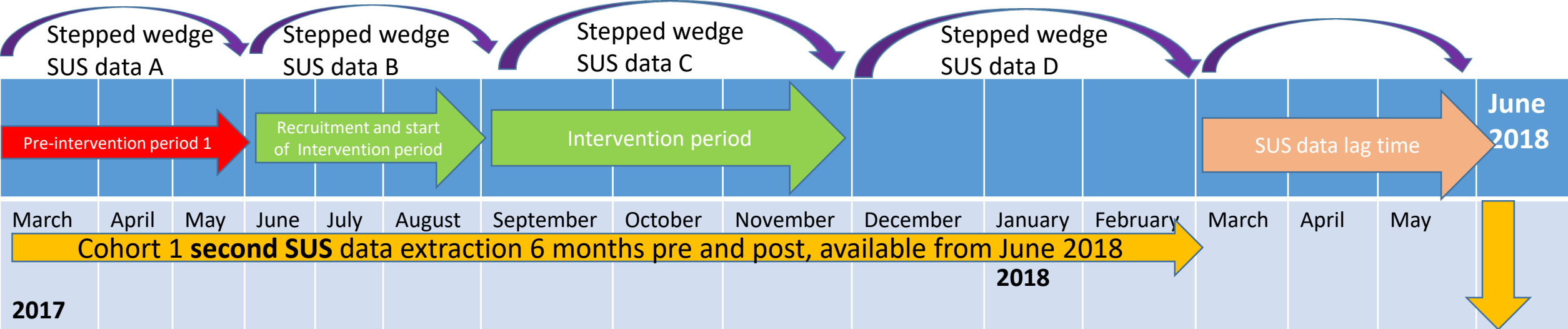
Clinical scores and other evaluation data are also based on cohort 1 of this study

Study design: Phase One (3/12 follow up from start of treatment)

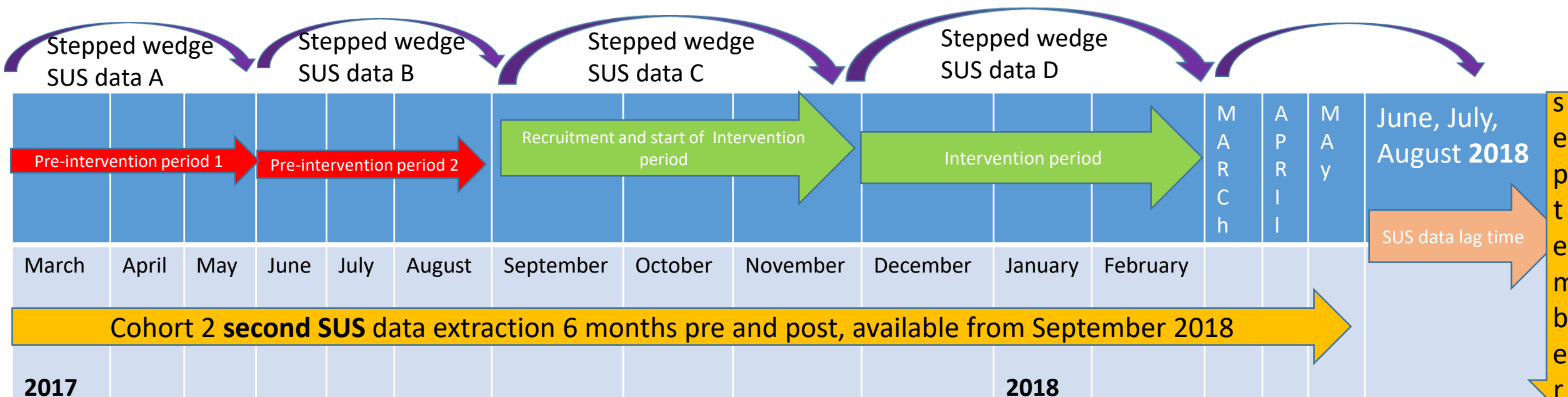


Study design: Phase Two (6/12 follow up from start of treatment)

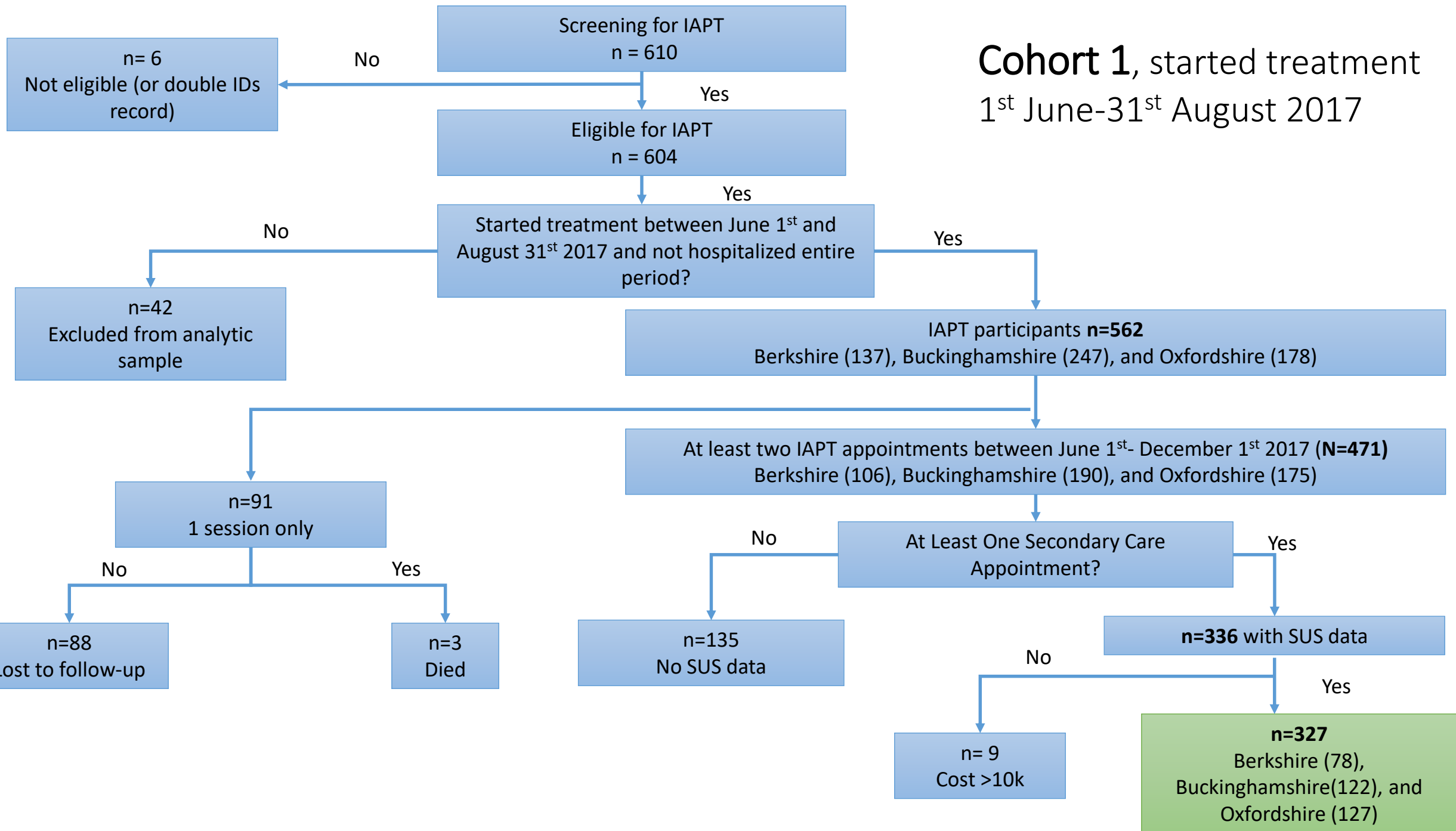
COHORT 1



COHORT 2



Cohort 1, started treatment 1st June-31st August 2017



Clinical outcomes based on PHQ9 (Patient Health Questionnaire used for assessing depression) and GAD 7 (General Anxiety Disorder assessment)

	Recovery rate	Reliable improvement rate	PHQ-9 change	GAD-7 change	2 or more treatment sessions
THAMES VALLEY Overall	56.9% <i>Above national requirement</i>	59.3% <i>A good average</i>	4.5 drop <i>A significant reduction in symptoms</i>	4.1 drop <i>A significant reduction in symptoms</i>	72%
Oxfordshire	53.9%	60.4%	5.4 drop	4.5 drop	67%
Buckinghamshire	56.6%	64.1%	5.5 drop	4.2 drop	68.4%
Berkshire	62.1%	49.5%	3.8 drop	3.3 drop	84%

*NB: we are currently investigating the differences between the services which may be due to inclusion criteria differences

Healthcare *costs* pre and post IAPT-LTC treatment

Secondary Care

Health care *utilisation cost*

Based on **actual cost** as recorded in Secondary Usage Service (SUS) data

Data supplied by NHS South, Central and West Commissioning Support Unit

Healthcare utilisation cost findings: **secondary care summary**

Does psychological therapy provided by the IAPT-LTC programme reduce health care utilisation and associated health care cost?

Secondary Care cost analysis for a 3 month period

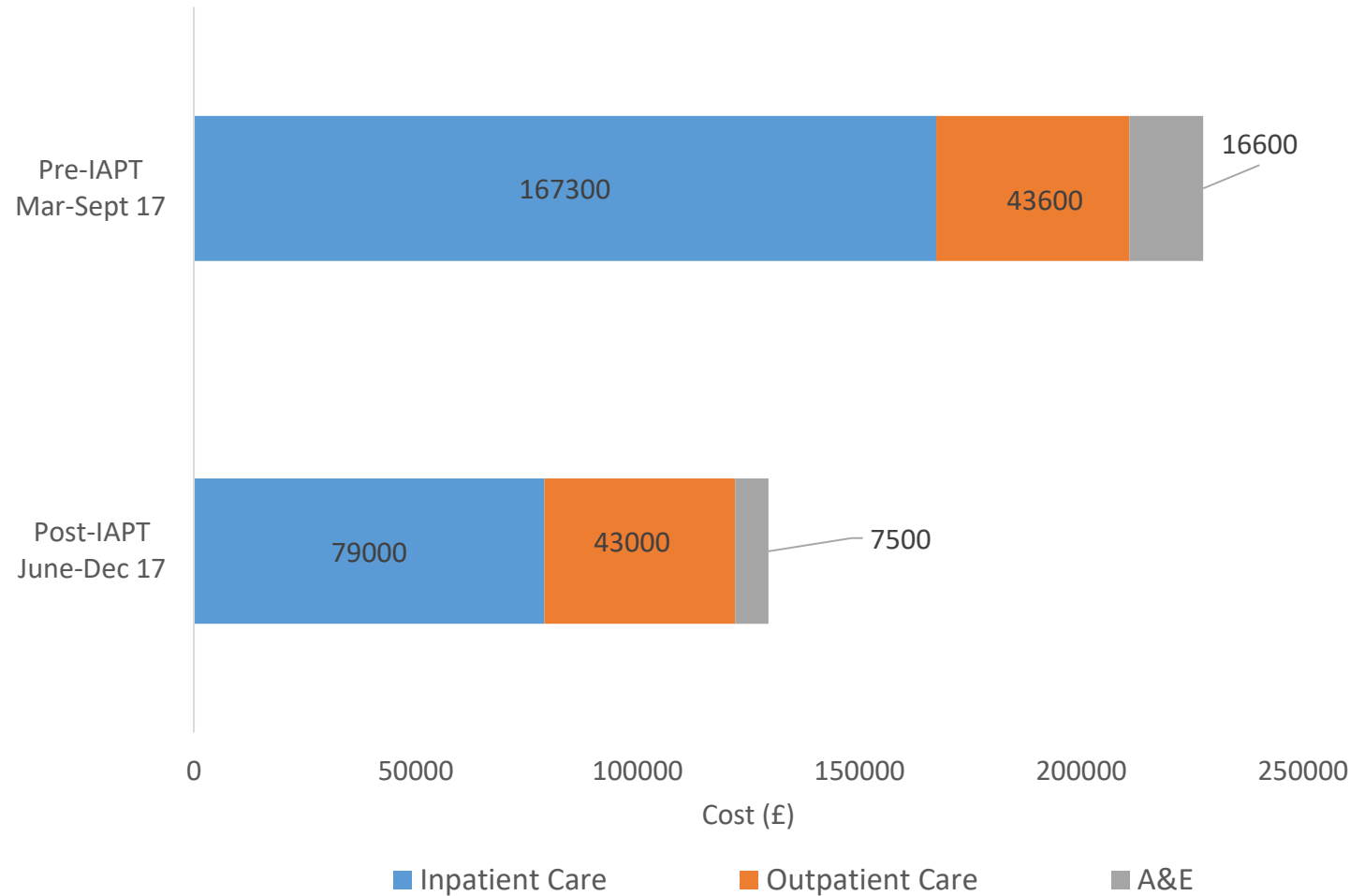
- *A&E + Outpatient + Inpatient care actual cost*
- *Taken from Secondary Uses Service (SUS) data provided by the CSU*

Thames Valley-wide total cost savings over 3 months **for cohort 1** = **£98,000** (from Pre-IAPT treatment £227,500 to Post-IAPT treatment £129,500)

Cost reduction of £212 per patient in secondary care

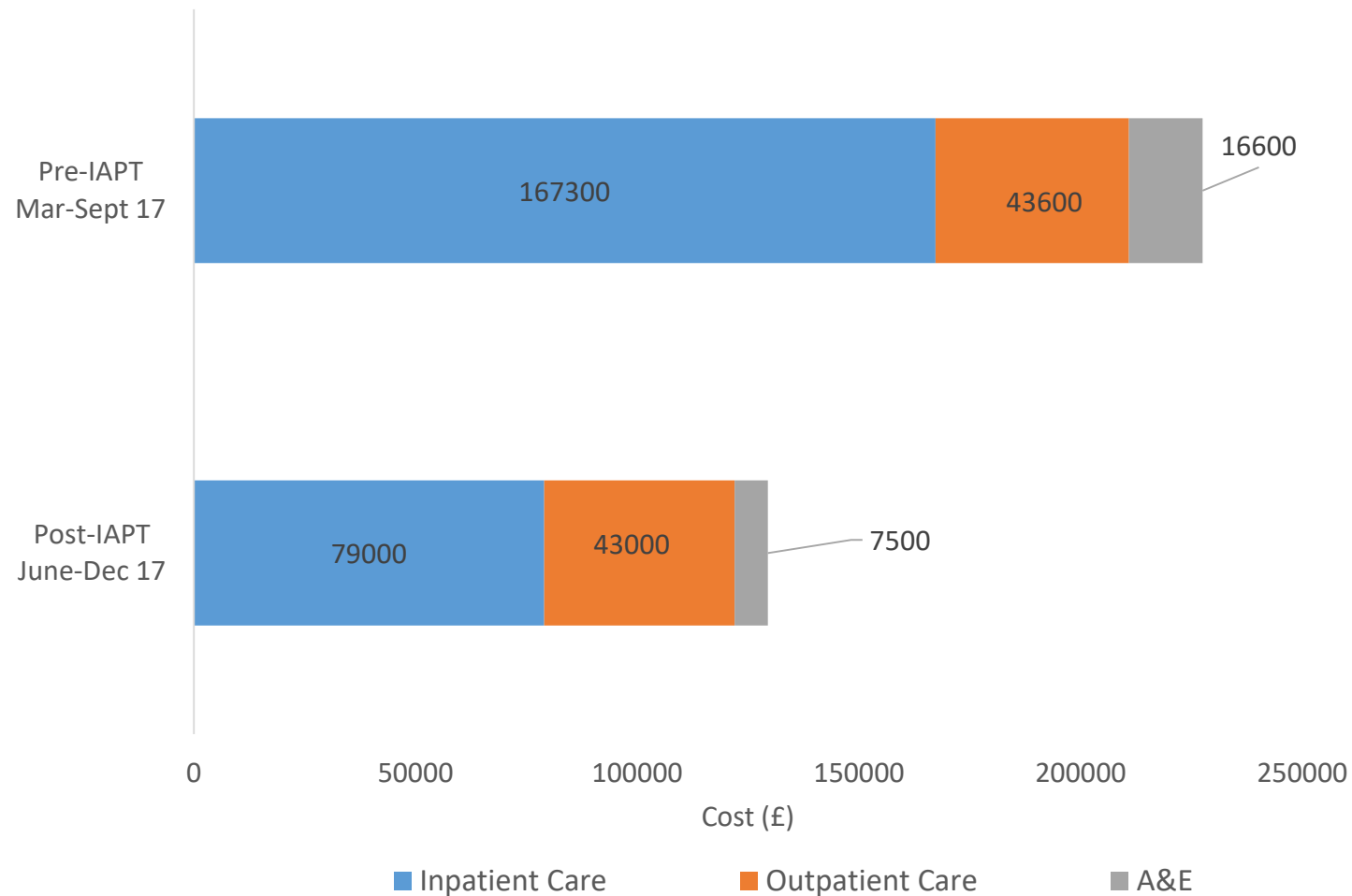
Total actual secondary care cost reduction for a 3 month period (all patients with SUS data 336 excluding those >10k SUS spend)

n=327



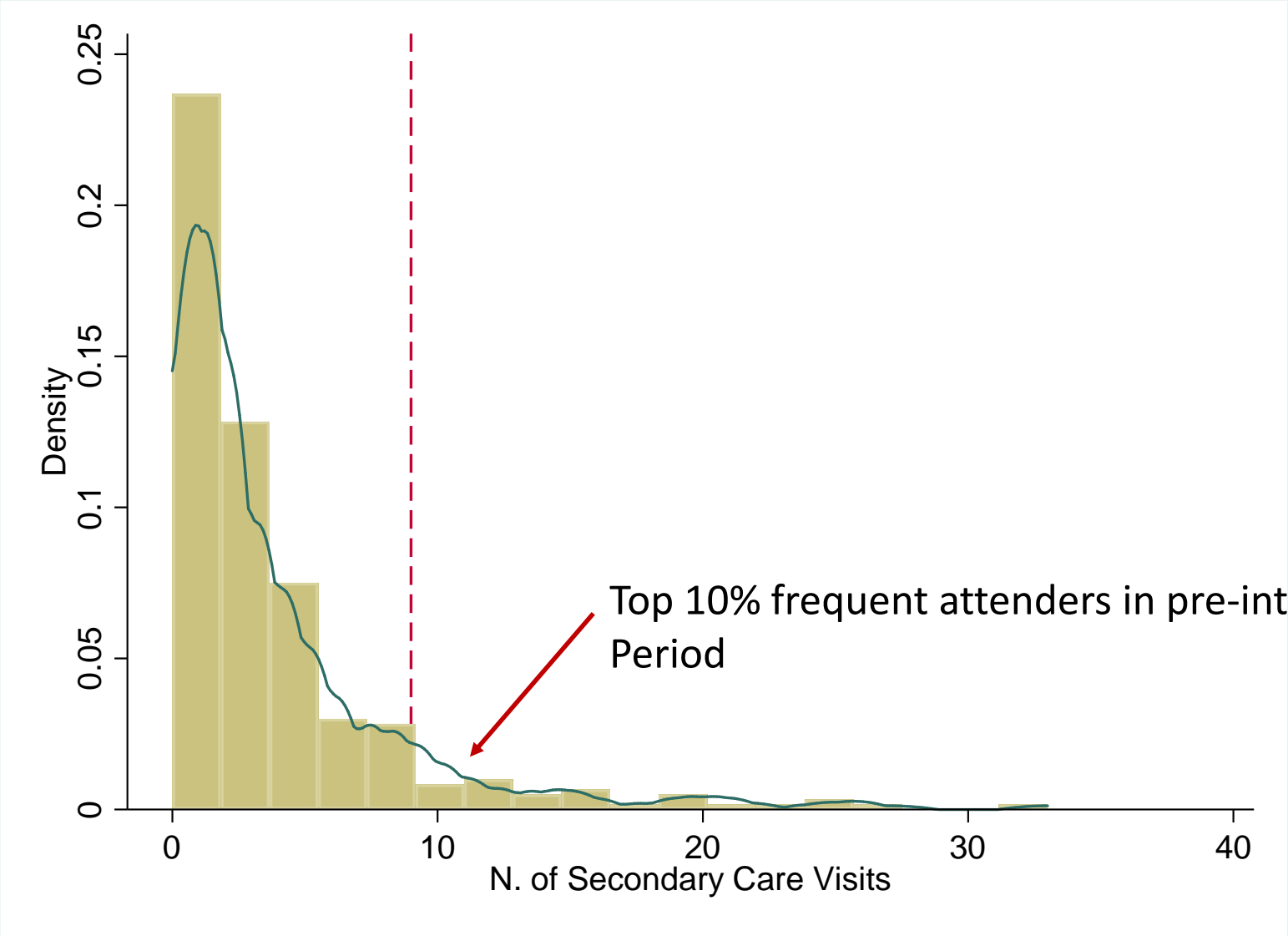
= £98,000
(227,500-129,500)

Per Patient secondary care **average cost reduction** based on all patients who received 2 or more sessions of IAPT-LTC treatment and excluding 9 patients who had >10k spend (471-9= n 462)

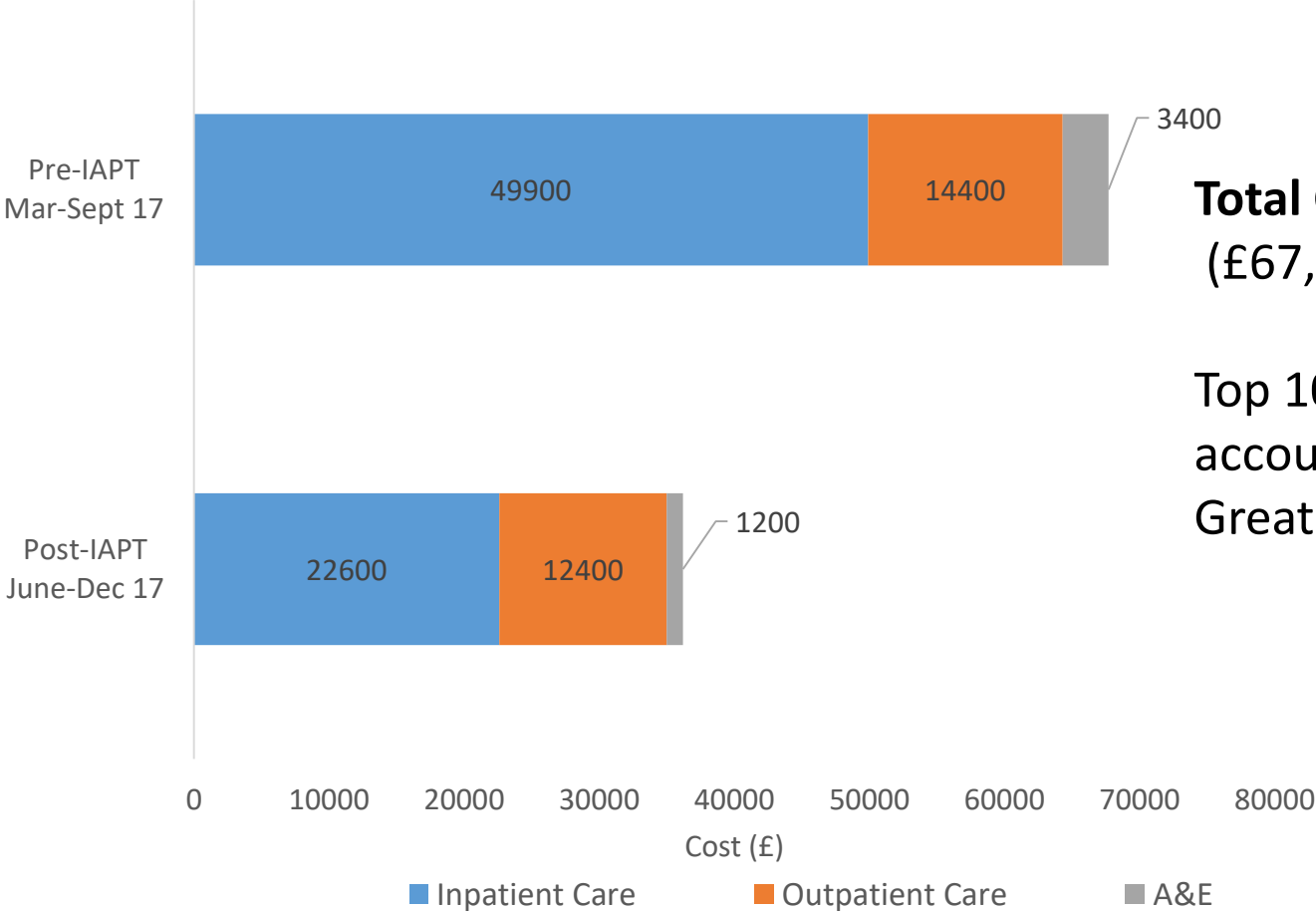


£98,000 : 462 =
£212

Secondary care frequent attenders sub-analysis (n=56)



Secondary care frequent attenders total cost savings for a 3 month period (n=56)



Total Cost Savings of £31,500
(£67,700 Pre IAPT to £36,200 Post IAPT)

Top 10% frequent attenders (17% of SUS sample n=327) accounted for almost 1/3 of total cost reductions
Greatest savings in inpatient care*

*NB: we are exploring this in more detail

Healthcare *costs* pre and post IAPT-LTC treatment

Primary Care

Health care utilisation *cost*

Based on a sub-group of paired i.e. both before and after scores, high quality CSRs N= 57 collected by the services

(We found that CSRs which were not fully completed both times could really bias the outcome and so excluded all those not fully completed or paired)

Healthcare utilisation changes: *primary care cost summary*

Primary Care cost analysis pre and post

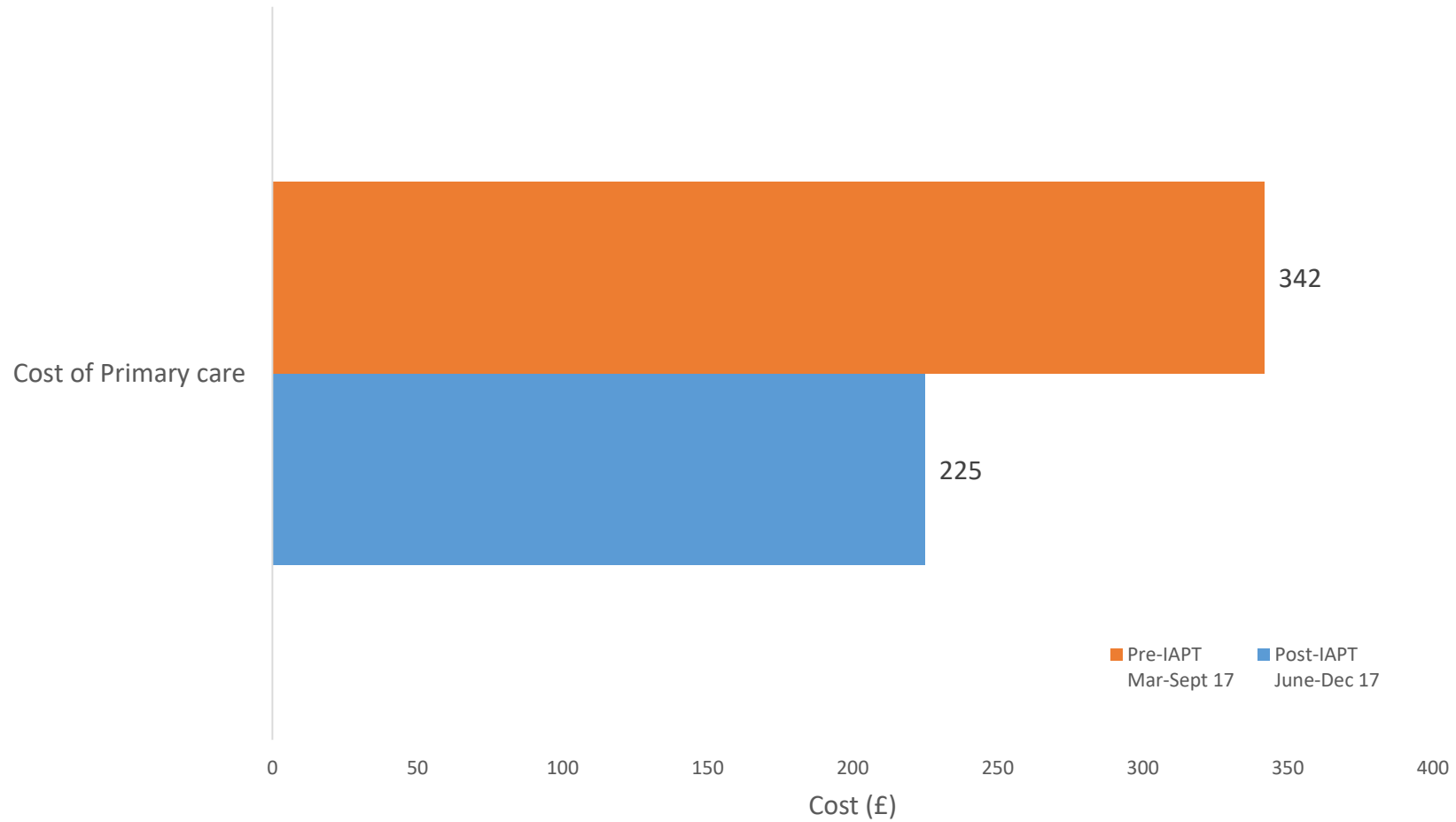
- All attendances in primary/ community care as reported through the Client Service Receipt Inventories (CSRIs) ,first one taken at start of IAPT treatment for a 'before' measure and second one taken at the end of IAPT-LTC treatment for the preceding 3 months as an 'after' measure. Figures based on 57 paired and fully completed CSRIs
- Used Thames Valley CSRI reference costs 'Revised price per contact' to calculate cost, see appendix at end of document

Cost per patient before IAPT treatment £342 and after IAPT treatment £225

Cost reduction of £117 per patient in primary care

Primary care per patient average cost reductions (3 month period)

(n=57)



Healthcare *activity* pre and post IAPT treatment

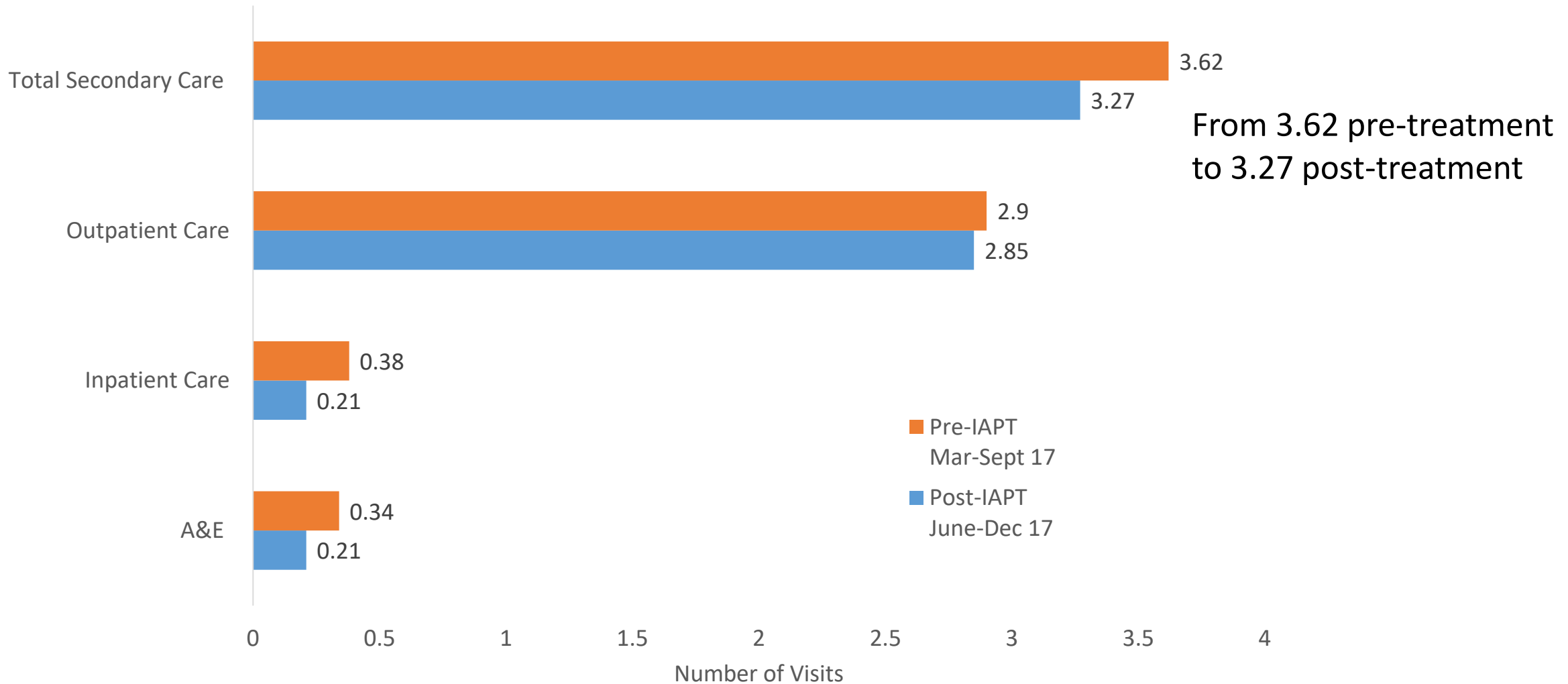
Secondary Care

Health care *activity* findings

Based on **actual secondary care *activity*** as recorded in SUS data

Data supplied by the Commissioning Support Unit (CSU)

Activity: Secondary care per patient **reduction** in number of visits pre and post SUS data $n=327$



Secondary care activity: average usage per patient (SUS) $n=327$

	<u>Pre-IAPT</u>	<u>Post-IAPT</u>
Number of A&E Visits	0.34	0.21
Number of Inpatients Episodes	0.38	0.21
Number of Outpatient Visits	2.90	2.85
Total	3.62	3.27

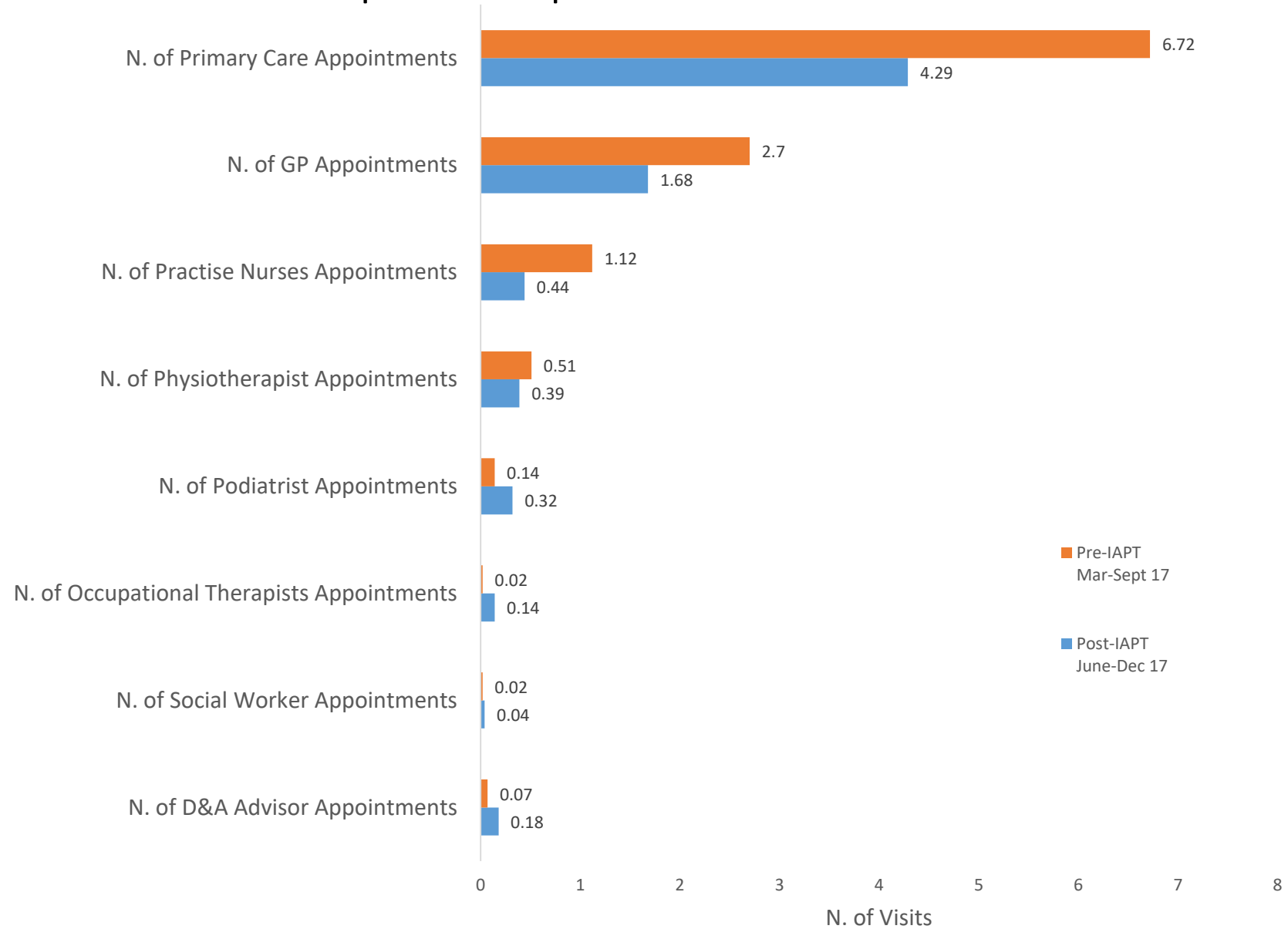
Healthcare *activity* pre and post IAPT treatment

Primary Care

Health care *activity* findings

Based on a sub-group of paired, high quality CSRs $n= 57$
collected by the services

Activity: Primary Care average per patient reduction in number of visits pre and post CSRI data $n=57$



Primary care activity: average usage per patient *n*=57

Paired CSRs	<u>Pre-IAPT</u>	<u>Post-IAPT</u>
<i>Total Number of Primary Care Appointments</i>	6.72	4.29
Number of GP appointments	2.70	1.68
Number of practice nurse appointments	1.12	0.44
Number of physiotherapist appointments	0.51	0.39

NB: small increases in podiatrist, social work and D&A advisor appointments

Thames Valley Cohort 1 patients, summary of findings

Does psychological therapy provided by the IAPT-LTC programme reduce health care utilisation and associated health care cost?

Our evaluation of cohort 1 shows both a reduction in healthcare services utilisation and a reduction in healthcare costs for patients who received IAPT-LTC treatment. Patients also experienced considerable therapeutic benefits with a reduction in depression and anxiety symptoms and above national average recovery rates.

What's the bottom line?

- Total (primary care + secondary care) savings per patient in a **3 month period: £329.**
- **Monthly** savings per patient = **£329 : 3 = £110**
- Average **cost of IAPT treatment: £684** (David M. Clark, national data) equals 7 months savings
- Average **length of treatment benefit: at least 24 months** (*'Thrive-The Power of Evidence-Based Psychological Therapies'*, David M Clark and Richard Layard)

Health economics conclusion

Patients who go through the IAPT-LTC treatment programme are, on average, and after IAPT treatment costs have been taken into account, estimated to save the health system

17 x £110 = **£1,870** over a two year period

* NB: this calculation is based on an assumption that the same cost savings are realised consistently and evenly over the 24 months quoted

Appendix

Thames Valley CSRI Reference Costs

Activity	Unit Cost	Agreed Thames Valley Cost	Comments	Revised price per contact
General Practitioner (GP)	£27 -36 ¹	£32 ²	Include(same reference page) 1. include the average cost of prescription per consultation to this 2. Cost of a doctors training 3. Cost of direct care staff in the practice	£63
Practice Nurse	£36 ¹	£36	This is per hour. Appointment times vary significantly but a quick chat with my Practice nurse suggests 3 per hour would be a reasonable average	£12
Physiotherapist	£30-77 ¹	£54	This is per hour -suggest 2 patients per hour	27
Occupational Therapist (OT)	£30-77 ¹	£54	This is per hour -suggest 2 patients per hour	27
Specialist Nurse (e.g. cardiac nurse, diabetes nurse) (*assumed as Band 6 or 7)	£44-52 ¹	£48	This per hour, but they should average 2 per hour	24
Doctor other than GP for a Physical Health problem (*assumed as Outpatient Attendance)	£135 ¹	£135		
Podiatrist	£30-77 ¹	£54	This is per hour -suggest 2 patients per	27

¹ PSSRU- Unit costs of Health and Social Care 2016- for page nrs see Mike Woodall's document

² Where necessary, I have rounded up/ down figures to the full pound

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